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INFORMATION REPORT

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THIS IS UNEVALUATED INFORMATION

SOURCE

Ballistics

1. Theoretical and practical research on ballistics is being done by the Military Technical Institute (VTU) under the directorship of Col. Dr. Vitasek. Theoretical ballistical research is headed by Prof. Dr. Gebauer, and his lectures are attended by artillery and general staff officers. Practical artillery tests to determine muzzle velocity, trajectory and penetration are made at the proving grounds in Bolevec near Pilsen by firing into the sand through a tunnel and by selective measuring of muzzle velocity with a stroboscope.

2. The following sections are set up in the VTU for the development of ammunition:

   a. Infantry: small-caliber ammunition for 6.35 and 8 mm pistols, ammunition for rifles and for 7.92 mm machine guns, high-explosive 20 mm cartridges, signal and illuminating rockets for the infantry, artillery and air force.

   b. Artillery ammunition for light, medium and heavy field guns of calibers 7.5, 8, 10.5, 15, 18, 21, and 30 cm.

   c. Mines and 9 mm (sic, probably 9 cm) shells for mortars, anti-personnel mines for army engineers, 14 cm shells for heavy mortars, and antitank mines.

   d. Rocket weapons, headed by Ing. O. Liska. Rocket weapons development is also done at the former Schmidding Copper Works in Podmokly which is now known as Krizik, n.p.

3. The development of rocket weapons, especially of the 8 and 9 cm to 180 cm rockets, was given special attention because of an order issued by the first section of the General Staff. As the basis for this study the remains of German rockets found in the Czech border area at the end of the war were used. Parts of the V-1 and V-2 rockets were manufactured in the Schmidding factory during the war, and the Germans left plans and blueprints there. With these blueprints and Soviet literature the present research on rockets is being carried out, but without much success.

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4. The further development of fuses for grenades and shrapnel for artillery is based on the Pantoflicek round fuse system. Such development is combined with the production of light and heavy artillery at the Skoda Works in Pilsen as well as at the ammunition factory at Nyrany near Pilsen. The development of anti-aircraft and antitank ammunition is being done at the Skoda Works in Adamov and at the arms factory in Vsetin.

5. Production including assembly-line production is directly subordinate to Department II/8 of the Ministry of National Defense. This department has a staff of 50 officers. The production of artillery ammunition by assembly-line methods is now being planned, and the production of fuses has been assigned to the major factories in the fourth industrial zone.(1)

6. The main factory occupied with assembly-line production is the Skoda Works in Adamov, where the production of steel parts for fuses for 10 and 10.5 cm ammunition has already been started. A factory for assembly-line production is planned to be built near Havlickuv Brod, and another in Holysov. The production of steel chains which is done in Holysov will be transferred to middle Slovakia, and the Holysov factory will be equipped for manufacturing antiaircraft ammunition.

7. In the Kolycany factory artillery shell cases are being produced. Col. Hoebrigel, an expert and anti-Communist, is the military supervisor in this factory. Small-caliber ammunition is produced at Zbrojovka Brno and in the Vlasim armament factory, formerly Sellier & Bellot.

Weapons

8. The development center of small-caliber weapons has been moved from Zbrojovka Brno, managed by Dr. Farlik, to the Askania factory on Kladenska Street, Vokovice, near Prague. This center extends over the western section of the factory and contains construction offices, mechanical workshops for producing models and prototypes, and workshops for the production of parts of weapons. Leading personnel are:

a. Ing. Pros, formerly with Zbrojovka

b. Ing. Mares, formerly with Zbrojovka

c. Pekarek (sr.)

d. Pekarek (jr.)

9. Another development center, which works independently, is located at Brno, 7 Masna Street. It is headed by the Holek brothers, who were constructors of the ZB 26 and ZB 30.

10. The following arms are being tested in both of these centers:

a. Automatic rifle, caliber 7.92 mm, magazine in butt, automatic loading and discharge, and repeater. Constructed by the older Holek brother.

b. Sub-machine gun, caliber 8 and 9 mm, rifle-like construction with a lever on the butt so that it can be used like a rifle. It has a drum-shaped magazine, 80 cartridges, and discharges 100 cartridges per minute. The upper part of the barrel has a perforated protector.

c. Heavy machine gun built at Zbrojovka Brno. Serving as a model for this machine gun is the 20 mm antiaircraft Oerlikon machine gun, with highly-explosive cartridges. Zbrojovka Vsetin tried for a short time to manufacture the Oerlikon machine gun under license from the Buchrle-Oerlikon factory, but it had much difficulty especially with the tripods which often collapsed. The Zbrojovka Brno prototype has a caliber of 20 mm and discharges 170 shots per minute.

11. The sub-machine gun as well as the automatic rifle is the most recent model. It has not been introduced into the Czech army because the Ministry of National Defense has not yet decided whether a sub-machine gun of Soviet caliber 8 mm (2) or 9 mm will be produced. This sub-machine gun has been offered for sale in South America by two representatives of Zbrojovka Brno, Ing. Jan Moravek and Ing. J. Faigl. Bolivia and Venezuela have ordered these guns but the quantity is not known. A Kovo representative, Ing. Baltazar Germakian who is an Armenian by origin, has also offered the gun for sale to Abyssinia.

Tanks and Armored Vehicles

12. Research and control of production of tanks and armored vehicles are concentrated in the first section of the VTU under Col. Tesar. Tactical requirements are set by the first section of the General Staff.

13. At conferences between the Ministry of National Defense, the General Staff and representatives of the industries concerned, it was decided that tanks and armored vehicles of medium weight will be produced by the following firms:

a. Skoda Works, Pilsen: medium tanks and heavy armored vehicles.

b. Ceskomoravska Kolben-Danek: light reconnaissance cars and medium tanks.

c. Automobile factory in Koprivnice: caterpillar armored cars, trucks with six and eight wheels on floating axles, and light hauling trucks.

14. Upon instructions from the USSR the production of heavy T34 tanks has been abandoned although it had been included in the production plans.

15. One hundred light armored cars, like the old German car, were to be produced at the Skoda Works and shipped to Switzerland, probably for re-export to Spain. This transaction had been negotiated by manager Daxant (3) of the armament section of the Skoda Works but it was not concluded upon order of General Heicin of the General Staff. The cars remained at the Skoda Works for use as prototypes of a new reconnaissance car. Ceskomoravska Kolben-Danek also produced 30 of these cars. Both factories are working on medium tanks with a construction similar to that of the German Tiger.

16. Armored plates up to 30 mm thickness are being tested at the proving grounds of the Skoda Works in Bolevec. Latest tests have shown that the plates made by Poldina Hut and the Vitkovice plant lack homogeneity when they are used as targets. Plates are tested for their resistance to missiles shot from various distances at angles from 90° to 40°. Recoil tests are also being made.

17. Tests of armored plate are carried out to determine the following:

a. Chemical structure of the steel.

b. Hardness of the steel according to Vicker's scale.

c. Tempering capability with Vicker's apparatus.

d. Resistance to shooting, tested at the proving grounds in Bolevec.

18. The armored plate consists of an alloy steel containing high proportions of wolfram, chromium and cobalt. The percentages of these metals are determined by Section II/2 of the Ministry of National Defense.

Optics

19. The research institute for theoretical and applied optics is located in the same block as the development center for small-caliber weapons in the Askania factory in Vokovice. The institute is headed by Ing. Dr. Hrdlicka. Originally it was concerned with the development of civilian optical equipment, but because it was unable to supply the VTU with required technical equipment, the institute was set up in the Askania factory to work on military needs. Its research covers optics for military application including listening devices for anti-aircraft artillery. Intensive work is being done on fire-control apparatus for batteries of 8.35 caliber, Horejs system.

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20. A section for radar development is also included in the institute. Work is being done in the Skoda factory at Pilsen.

21. Practical tests on optical material for military use are being carried out at the Sonet plant, the plant at Trnovany, and the plant at Smrzovka which is managed by one Morgenstein.

22. Another development center for optics and allied subjects is contained in the Technical University, headed by Professor Dr. Mazurek. This institute has the most expensive, modern and perfectly equipped laboratories, which are situated in the Industrial School for Optics and Precision Mechanics at Prerov. Practical and developmental work is directed by manager J. Kral, a former employee of the Orb and Otys firm in Prague. Distance measuring instruments for artillery are being tested there.

Uniformity of Calibers

23. In order to adapt Czech armament to Soviet requirements, a combined commission called the Unification Commission has been formed. It is directly subordinate to the Chief of General Staff. Members are representatives of the Ministry of National Defense, industry and science. The army is represented by General Hrbek and General Maris, and industry by Dr. Piskac and Dr. Skalicky.

24. The activities of this commission will be directed mainly to uniformalizing calibers in order to facilitate exchange of ammunition, weapons and related equipment. Up to the first half of 1950, no agreement regarding artillery and infantry armament had been reached. Some agreement on the caliber of sub-machine guns has been arrived at and of course the Soviet 8 mm caliber (4) was accepted.

25. The one-sided nature of these negotiations is apparent. The Soviets are contributing only such data which have already been published, whereas they are requesting that the Czechs furnish all they have. Numerous Soviet commissions of experts have come to Czechoslovakia. They have been assigned to various factories and engage in extensive prying. Their attention is concentrated on metallurgical, chemistry and pharmaceutical production. One commission, headed by Ing. Novikov who is assisted by a woman engineer, is working in the Poldina Hut. Novikov is mainly interested in:

a. Production methods in the manufacture of steel.

b. Production of steel for pharmaceutical purposes (Poldi anticorro-special steel).

c. Height of temperature before steel corrodes.

26. Under the supervision of this Soviet commission plates of thin and medium thickness are being produced for Poldina Hut from its anticorro-special steel at the Prague Steel Company in Dvur Kralove.

27. Another commission was installed in the Vitkovice Ironworks which are occupied with the production and testing of armor plate. These works are producing armored gun turrets for Soviet warships under the supervision of this commission and have been required to manufacture ammunition machinery in a former Diesel-engine factory. The following machinery is being produced:

a. Presses

b. Calibration machines

c. Cartridge-case fillers

d. Magazine fillers

28. These Soviet commissions are not subordinated to the commercial mission in Prague which is an independent unit for handling shipments going to the USSR. This commercial mission is in close contact with the Czech Commission for Trade with the USSR, of which the chairman is J. Fierlinger, a brother of the former Prime Minister Zdenek Fierlinger. Offices of this commission are in Prague-Bubenec, Na Zatorce.

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-5-

Attachment: Sketch showing location of ammunition depots and plants and industrial zones.

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